



THE FEEDING OF SWINE

Now and after the war, the welfare of the hog and bacon industry depends upon quality and low production costs. Economy in production adds to the profits from pig raising. The spread between the cost of production and the selling price is governed by the cost of feed and the market price of pigs. The cost of feed per pound of gain depends upon a proper balance of digestive nutrients and economy in feeding practice. Therefore the profits from production are increased with every economy effected. This applies as well to the breeding stock as to the pigs for bacon. The following rations are balanced and compounded according to the best requirements in feeding.

RATIONS

THE STOCK BOAR

Feeding the Year Round.—If skim-milk, buttermilk or whey are available, supply at rate of 3 to 10 pounds daily as needed. The meal ration may be made up of ground oats, ground barley, bran and shorts in any combination of two or more, fed at the rate of 2 to 5 pounds per day, as needed. Use judgment in feeding the boar. If overfat, he will prove a poor or uncertain stock-getter, indifferent and sluggish at service. If too thin, he will transmit to his get, lack of vigour and vitality and poor condition generally.

Summer Feeding.—Supply a pasture of clover, alfalfa, grass, or annual crop, with water and shade. If no pasture is available, supply fresh green feed liberally—clover, alfalfa, grass, green peas and oats; or weeds as lamb's quarter, pig weed, dock, etc.

Winter Feeding.—Alfalfa or clover hay dry in racks. Roots such as mangels or sugar beets, pulped; cooked potatoes or turnips, 5 to 10 pounds daily.

Exercise.—Importance cannot be over-estimated. Supply a roomy, shady pasture in summer, not a filthy, fly-infested pen or corner. In winter arrange a paddock out of doors, close to the barnyard, or give him the run of the barnyard for a few hours. As a shelter use the year round, a cheap, portable, single-boarded cabin, about 6 feet by 8 feet. Supply lots of bedding.

THE BROOD SOW

Summer.—Pasture and feeding same as advised for boars.

Winter.—Roughage same as for boars. Meal mixture of oats, barley, and bran or shorts, equal parts, plus skim-milk or 5 per cent tankage, except when

nearing farrowing time, when the bran should be increased. Avoid corn in more than one-quarter the ration. Feed meal at the rate of 3 to 5 pounds as needed.

During Gestation.—Flush, or bring the sow into condition before breeding. Maintain this condition after breeding. Avoid overfatness with the ensuing troubles—difficult farrowing, small, weak, and dead pigs. Too thin condition, particularly with the young sow, may permanently injure her and in any case will likely mean small, thin pigs, a high percentage of runts, and small milk secretion. The in-pig sow must receive a cooling ration tending toward a laxative nature.

Do not forget earthy or mineral matter. Earth, sods or ashes are all good. To 100 lb. of meal the following addition may be made: $\frac{1}{2}$ lb. bone meal, $\frac{1}{2}$ lb. iodized salt, and 1 lb. ground limestone; or a mixture of these ingredients in the above proportions may be placed before the sows.

Exercise.—Equally as important as with the boar. With the exception of that period spent in the farrowing pen, keep the brood sow outdoors the year round in a fair-sized paddock with a portable cabin, 8 feet by 10 feet, or suitable shed, placing four or five sows in each. Choose a dry site. Make the sow exercise to obtain feed by placing the hay rack and feed trough at some distance from the cabin or shed.

After Farrowing.—Avoid exciting the sow during or after farrowing. Always be present at this time but give only such attention as may be required; no more. First feed should be a tepid slop of light feed. During the first ten days gradually increase ration to maximum. Particularly avoid over-feeding, causing scours and thumps in little pigs. Feed the sow for milk production such rations as ground oats, 2 parts; ground barley, 1 part; bran, 1 part; and shorts, 2 parts; or ground oats, 3 parts; ground wheat, 2 parts; and ground barley, 1 part; both combinations with milk by-products or other protein supplement. In summer, allow green feed or pasture only after pigs are two weeks old. In winter, feed roots, clover hay, etc., to keep functions healthy and blood cool. Provide sods or empty a pailful of earth and wood ashes in a corner of the pen. If pigs are over-fat, lazy and sluggish and the sow a heavy milker, force the pigs to take exercise. When weaning, cut down meal supply of sow.

WEANING PIGS

The strength of the pig when farrowed (governed largely by factors already discussed) exerts possibly the greatest effect on the ultimate economy of production. Second only in importance to this point is the influence of good feeding and management of the suckling and the weaned pig.

Teach the litter to eat three weeks before weaning. Use a creep which admits the pigs but not the sow. For best results milk products are practically a necessity, with cracked wheat, finely ground oats, and middlings. Avoid overfeeding, and make exercise compulsory. Gradually increase grain allowance until weaning. If skim-milk is available and two litters per year are anticipated, wean at six weeks of age; otherwise, wean at eight weeks.

RATIONS FOR WEANING AND GROWING PIGS

After weaning, start grain feeding as follows:—Daily ration for two to three months pig weighing about 50 pounds: 1 to 2 pounds of a mixture of finely ground oats, 2 parts; barley, 1 part; wheat, 1 part; shorts or middlings, 1 part; or a combination of three of these feeds; with 5 pounds of skim-milk daily. Tankage, fish meal, or a hog protein concentrate should be included at the rate of 10 to 12 per cent of the meal ration if skim-milk is not available. As pigs increase in age, gradually increase the grain ration to three pounds or more daily. Barley may be increased after three months of age until at five to six months of age the ration will be composed of 50 to 70 per cent of barley for market hogs. Corn may be fed in moderation after four months, and may be used to replace a portion of the barley during the finishing period but should be

avoided for young pigs. Shelter the paddock-or pasture-fed pig either with a portable cabin or a light, open-sided shed and supply clean fresh water.

OTHER GOOD GROWING RATIONS

1. Ground barley, 2 parts; ground oats, 2 parts; and ground wheat, 1 part.
2. Ground barley, ground oats, and shorts or middlings, equal parts.

Gradually increase barley as the pigs grow and develop.

Include minerals at the rate of 2 pounds per hundred of the grain mixture. A suitable mineral mixture consists of bone meal, 1 part; iodized salt, 1 part; and ground limestone, 2 parts.

Skim-milk or buttermilk if available, is ideal: For weaning pigs feed 3 to 4 pounds milk to each pound grain. For growing pigs, 2 pounds milk, and for fattening pigs, 1 pound milk for each pound of grain. If milk by-products are not available, add tankage, fish meal or hog protein concentrate to grain: 10 to 12 per cent in the weanling ration; 7 to 8 per cent for growing pigs; and 5 per cent for fattening pigs.

See Publication No. 601, "The Self Feeder for Hogs".

PASTURE AND GREEN FEEDS

Pasture may undoubtedly be made good use of on the average farm. This method of feeding, however, has disadvantages, particularly with the active bacon hog—excessive exercise not being conducive to fast finishing. With plenty of skim-milk or buttermilk available, experimental evidence and that of practical feeders would indicate that growing bacon pigs may be fed for market more economically indoors or in small, well-shaded pens, supplied with racks for the feeding of green feed.

Where pasturing is employed alfalfa and clover are the best crops, in the order stated. Pasture a sufficient number of hogs to keep down the growth, but avoid too close grazing. Heavy seedings of oats or barley pastured when about six inches high have given excellent results if kept sufficiently grazed down. Rape is another useful crop best suited to the pig over five months old.

For brood sows, and young breeding stock, pasture provides not only the cheapest but the most healthful method of feeding and management. For the pregnant sow, where a light meal ration is provided, such outdoor conditions prove ideal.

ECONOMICAL PRODUCTION AND HEALTH—GENERAL RULES FOR FEEDING

1. Feed young pigs three times daily. (2) Never feed more than the pigs will clean up. (3) Make all changes in rations slowly. (4) Realize that the breeding pig is an out-of-doors animal. (5) Approximate outdoor conditions in the farrowing and feeding pen, i.e., supply fresh air, light, drainage, and above all, avoid draughts and dampness. (6) Make exercise a prime factor with every class and age of breeding pig. (7) For economy and health see that green feed, pasture, roots, and well-cured roughage are part of the ration, particularly for breeding stock. (8) Remember that the pig is a poor patient and particularly difficult to treat. Strive to eliminate the causes of disease—prevent rather than cure it.

THE HEALTH OF SWINE

No attempt is made to enumerate swine diseases. The following descriptions and treatments apply to several ailments already alluded to, such as are usually caused by faulty methods of feeding.

Constipation. Particularly to be guarded against, with pregnant and milking sows

Cause.—Too little exercise, lack of succulents and bulky material, and too much concentrated feed in the ration.

Treatment.—Remove cause. Give 2 to 4 ounces raw linseed oil, once daily, in slop, for mature animals. If no effect, give as drench, 4 ounces Epsom salts. Use laxative feeds, bran, oilmeal, flaxseed, etc. Avoid drastic purgatives with the milking sow. Try to induce the desired condition through feeding cooling, laxative feeds.

Diarrhoea (Scours)

Common and often fatal with young pigs particularly.

Cause.—Over-feeding the sow after farrowing as with corn or other rich feeds. Sudden changes in feed. Use of decomposed or sour slop. Nervousness and irritability in the sow.

Treatment.—Change feed. Give 15 to 20 grains iron sulphate to the sow in slop, night and morning. Mix lime-water with slop, or supply, where sow can reach it, a mixture of iron sulphate, sulphur, and salt (equal parts), with four times quantity of ground charcoal. Limit supply if sow is greedy. For pigs give castor oil.

Thumps

Symptoms.—Usually seen in young pigs; dullness, rough in hair; unthriftiness; constipation or diarrhoea; short breathing with a peculiar thumping noise and cough may be present.

Cause.—May be the result of using unsuitable feeds and overfeeding the sow. Sometimes these are the outward and visible symptoms of worm infestations.

Treatment.—Reduce feed to sow and provide exercise for young pigs.

Anemia

Symptoms.—Pale appearance, lack of vigour, staring hair, and general weakness in suckling and weaned pigs.

Cause.—Lack of blood forming materials in the diet, particularly iron.

Treatment.—Provide sods or earth. Supply iron by dissolving one tablespoonful of ferrous sulphate in one quart of water and sprinkle over sod. Reduced iron is also a good preventive. Place on the tongue of each pig when a week old, as much reduced iron as can be held on a ten-cent piece. Repeat treatment a week later. For weaned pigs, add two per cent ferrous sulphate to the mineral mixture.

Crippling and Rheumatism

Symptoms.—Swelling, stiffness and lameness generally of hind legs. Animal lies most of time until walking becomes impossible. Finally refuses to come to trough. Appetite disappears and death ensues.

Causes.—Strong food; over feeding; lack of minerals, vitamins and sunlight; lack of exercise; and damp quarters; poor drainage and ventilation. Usually a combination of all.

Treatment.—Prevent by supplying right conditions. Exercise outdoors in sunlight; feed as already outlined. Include minerals in the feed mixture. Give one tablespoonful cod liver oil per pig daily in feed. Feed in small quantities, milk, oats, bran and shorts with roots or green feed. Give two tablespoonfuls, daily, of sulphur, Epsom salts and charcoal, equal parts. For rheumatism, give salicylate of soda three times daily in feed, 20 to 30 grains to the dose. Provide dry quarters and plenty of bedding.

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